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**DiPenti et al.**

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(54) **HEADLAMP ASSEMBLY WITH HEAT SINK STRUCTURE**

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(58) **Field of Classification Search**

None

See application file for complete search history.

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(56)

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(52) **U.S. Cl.**

CPC ..... **F21S 48/321** (2013.01); **F21S 48/1104** (2013.01); **F21S 48/115** (2013.01); **F21S 48/1159** (2013.01); **F21S 48/13** (2013.01); **F21S 48/1305** (2013.01); **F21S 48/328**

(57)

**ABSTRACT**

A headlamp assembly for a vehicle includes housing for coupling the headlamp assembly to a vehicle and a heat sink structure having a first surface, a second surface, a first edge, and a second edge. A first light emitting diode assembly and a second light emitting diode assembly are each electrically connected to a circuit board. The second edge of the heat sink structure directly contacts an inner surface of the housing, such that the housing is separated into first and second sections by the heat sink structure. Illumination of the first light emitting diode assembly results in a low beam and illumination of both the first light emitting diode assembly and the second light emitting diode assembly results in a high beam.

**19 Claims, 21 Drawing Sheets**

